INVASIVE SPECIES MANAGEMENT WITH VOLUNTEERS
PROJECT PROPOSAL

Name of Project: Coastal Prairie and Oregon Silverspot Butterfly Habitat Restoration
Refuge: Nestucca Bay NWR

Project Urgency/Impact: The Cannery Hill Unit of Nestucca Bay NWR overlooks the Pacific Ocean and Nestucca River estuary. There are only four populations of the threatened Oregon Silverspot butterfly (*Speyeria zerene hippolyta*): all are on the central Oregon coast, and three of these are currently experiencing marked decline. The Service is partnering with the Institute for Applied Ecology (IAE) and several dedicated volunteer groups to convert 30 acres from highly aggressive, non-native pasture grasses and other invasive plants to native coastal grasses and forbs with an emphasis on the species and structure required for all life stages of the Oregon silverspot butterfly. When the parameters required by the Silverspot Recovery Plan have been reached, the Service's E.S. Program will introduce a non-essential, experimental population of the butterflies to this site. It is imperative that permanently protected, high quality habitat be established as quickly as possible so that the butterfly does not continue to decline and furthermore is not at risk of future decline due to changes in habitat management on a non-permanently protected (privately owned) site. The refuge coastal prairie, once restored through invasives removal and replanting, will provide this permanently protected site.

Friends Groups, Volunteers and Other Partners: Adult volunteers provide essential labor for the mechanical removal of invasive species, monitoring results and success, and planting plugs and seeding. The Jane Goodall Environmental Middle School in Salem grows out nectar plant plugs from seed collected from Cannery Hill, removes invasive species by hand, and replants with the nectar plugs, and monitors success of plantings on regularly scheduled field trips to the site. The NRCS Plant Materials Center supplies seed for post-invasives control re-seeding, and the Oregon Youth Conservation Corps makes several summer trips to the site to physically clear invasive plants and plant nectar plant plugs.

Survey/Inventory and Post-treatment Monitoring: Volunteers will provide the labor for inventory and monitoring of the restoration site using GPS units, following IAE established procedures, and using the monitoring strategies listed in the Nestucca Bay NWR CCP (Goal 2) to progress toward the ideal habitat attributes identified for success. Monitoring will evaluate vegetation composition and structure change, invasive species, and disturbance in management areas. IAE will guide and oversee the volunteers' monitoring and mapping activities to ensure quality. Pre-treatment inventories have included plant collection and identification which will continue as treatment commences.

Integrated Pest Management & Early Detection/Rapid Response (ED/RR): All practical and available IPM strategies will be utilized, with emphasis in the early stages on large-scale, carefully designed and scheduled chemical treatments and progressing toward solely mechanical and physical means. Populations and individuals of any invasive species located will be mapped via GPS and immediately evaluated for management action, following Early Detection Rapid Response elements. All stages are labor-intensive; however, the early chemical treatment stage is particularly funds-intensive. Because this habitat is urgently needed, volunteers are essential to monitoring success of each treatment and helping to determine timing and be ready to restore the habitat when the invasives have been successfully controlled.

Criteria for Project Success: Criteria for successful restoration of 30 acres is the achievement of habitat parameters listed in the Silverspot Recovery Plan and identified as attributes in Objective 2.1 of the CCP. Criteria also include use of volunteers as the primary labor force to achieve this coastal prairie restoration.

Budget: Please provide line item descriptions of the expenses that make up your budget. (*The budget is on the second page*)

Expense	Description	cost
Chemical treatment	Specialized herbicides (grass-specific, broadleaf specific) and surfactants proven not to harm native sand fescue and with low toxicity and low residuals.	$ 4,500
Mechanical treatment	Hand tools for volunteers to use in removing invasive plants	$ 500
Plant plugs	Plant plug grow-out from site-collected seed to replace invasives removed and controlled from site	$ 10,000
	Total request	$ 15,000